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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/610,948	06/30/2003	J. Kenneth Coppola	YOR920030131US1	4139

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EXAMINER

MASINICK, MICHAEL D

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/610,948	Applicant(s) COPPOLA ET AL.	
	Examiner Michael D Masinick	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/30/2003, 9/25</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-18 are pending in this application. For clarity sake, examiner is regarding the statement "Bill of materials" to mean "A listing of all subassemblies, intermediate parts and raw materials that go into a parent assembly showing the quantity of each required to make an assembly". There appears to be no additional definition in the specification to contradict this.

Claim Objections

1. Claim 2 is objected to because of the following informalities: Claim 2 states "said bill of materials" which was previously referred to as "bill of material flow". Appropriate correction is required in order to avoid an antecedent basis problem.
2. Claims 4-7 and 11-14 are objected to as being potentially non-limiting claims. Since only one of the group of rework parametric information is required in claim 1, none of these claims are required to be present to be read upon by the art.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 9-13, 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,099,431 to Natarajan.

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3. Referring to claims 1 and 8, Natarajan shows a method and storage medium for integrating rework operations into a planning process comprising: providing at least one rework Bill of Materials flow for use in conjunction with other Bills of Materials flow in a production planning process (Column 4, line 2); forecasting rework parametric information associated with said at least one rework Bill of Materials flow; said rework parametric information including at least one of: yields; cycle times; capacities; and rework materials (Column 3, lines 53-64 – “cycle times”); and generating an integrated manufacturing plan utilizing said rework parametric information and said at least one rework Bill of Materials flow (Col 4, lines 21-24).

4. Referring to claim 15, Natarajan shows a system for integrating rework operations into an advanced planning process comprising: a server executing: an advanced planning system (Figure 2, 42); an enterprise resource planning system (43); and a rework system (45); a technical data repository in communication with said server (Column 2, lines 27-32); and rework parametric information comprising: yields; cycle times; capacities; rework materials (Column 3, lines 53-64); wherein said rework system implements: providing at least one rework Bill of Materials flow for use in conjunction with other Bills of Materials flow in a production planning process (Column 4, line 2); forecasting rework parametric information associated with said at least one rework Bill of Materials flow (Column 3, lines 53-64 – “cycle times”); and generating an integrated manufacturing plan utilizing said rework parametric information and said at least one rework Bill of Materials flow (Col 4, lines 21-24).

5. Referring to claim 2, 9, and 15, Natarajan shows balancing capacity constraints for said at least one rework Bill of Materials with capacity constraints for said other Bills of Materials flow (“work-in-process inventory” – Col 4, lines 12-13).

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6. Referring to claim 3, 10, and 16, Natarajan shows executing said integrated manufacturing plan wherein said rework parametric information for materials not consumed during execution but determined to be reworkable are fed back into a second rework Bill of Materials flow operable for being consumed in a new integrated manufacturing plan (Figure 2 and Column 3, lines 1-5 – “The approach taken by this invention is repeated interactively and forms what may be characterized as a “bottoms up” approach to analyze the floor schedule taking into account the rework orders...” – Column 5, lines 46-48).

7. Referring to claims 4-7 and 11-13, Natarajan shows a percentage of product determined to have successfully passed testing, an amount of time required to rework a product including wait time, rework materials define materials created during a rework process, said integrated manufacturing plan is executed via a linear programming application. Examiner has noted above that these are not required elements. Specifically, “cycle time” as used in claim 1 and cited by examiner in the art rejection is inherently made up of the entire time, including wait time, from the start of one manufacturing cycle to the start of the next cycle.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 8, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Linear Programming." From *MathWorld*.

10. Natarajan does not specifically show that the solving program as shown in figure 2 is executed via a linear programming application.

11. Linear programming applications are well known and have been developed since 1947. "Linear programming can be solved using the simplex method (Wood and Dantzig 1949, Dantzig 1949) which runs along polytope edges of the visualization solid to find the best answer."

12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the simplex method of linear programming to do the solving of figure 2 of Natarajan because it is a well known way to "find the best answer" as shown above in the Mathworld article.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and to the state of the art at the time of invention.

14. US Patent 5,089,970 to Lee shows an integrated manufacturing system with rework capability but does not specifically mention a "rework bill of materials".

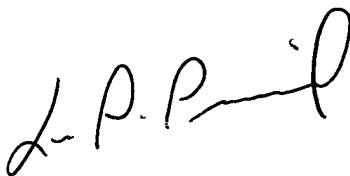
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D Masinick whose telephone number is (571) 272-3746. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MDM

A handwritten signature in black ink, appearing to read 'L. P. Picard', is written in a cursive style.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100